SABIC® LDPE 1808AN00

Low density polyethylene for Extrusion coating

Description

SABIC® LDPE 1808AN00 is an autoclave grade without additives. The material can be processed at high speeds, thanks to it's excellent draw down properties and superior web stability. The grade has a low gel level, offers good adhesion to various types of substrates and very good organoleptic properties..

Application

SABIC® LDPE 1808AN00 is suitable for a very wide range of applications. In particular, this grade is used in the production of cartons in which liquid foods are packed and where good organoleptic propeties are required.

Properties

Mechanical properties determined on compression moulded specimen (1.6 mm thick) at 200 mm/min.
ESCR determined on compression moulded specimen (2 mm thick) at 2 MPa and 60 °C.
Film properties have been measured at film of 25 µm.
Flexural crack resistance in cycles per 10 holes. Water vapour permeability at 38 °C and 100 % RH per 24 h..
Oxygen permeability at 23 °C and 0 % RH per 24 h.

Typical data. Revision 20080319

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR)			ISO 1133
at 190 °C and 2.16 kg	g/10 min	**7.5**	
Density	kg/m³	**920**	ISO 1183
Mechanical properties			
Tensile test			ISO 527-2
stress at yield	MPa	**9**	
stress at break	MPa	**14**	
strain at break	%	**510**	
ESCR	h	**2**	SABIC method
Film properties			
Tear strength TD	kN/m	**8**	ISO 6383-2
Tear strength MD	kN/m	**10**	ISO 6383-2
Tensile test film			ISO 527-3
Yield stress TD	MPa	**8**	
Yield stress MD	MPa	**9**	
Stress at break TD	MPa	**10**	
Stress at break MD	MPa	**13**	
Strain at break TD	%	**300**	
Strain at break MD	%	**300**	
Flexural crack resistance	-	**4000**	SABIC method
Permeability			SABIC method
water vapour (H2O)	g/m²	**22**	
oxygen (O2)	cm³/cm²bar	**0.9**	
Thermal properties			
Vicat softening temperature	°C	**88**	ISO 306
DSC test			DIN 53765
melting point	°C	**106**	
enthalpy change	J/g	**109**	

internet www.SABIC-europe.com
email TCC.TM-PE@SABIC-europe.com

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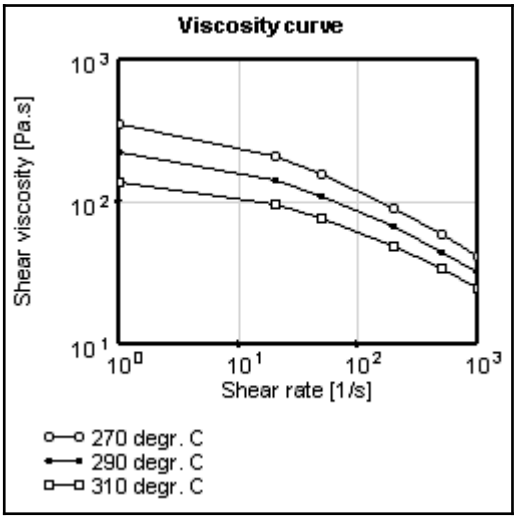

General information. SABIC Europe has already a long term commitment to the extrusion coating market with high quality LDPE materials and combines this assortment with a dedicated technical support.
LDPE for extrusion coating is being produced conventionally on an autoclave reactor in order to obtain a broad molecular weight distribution in combination with long chain branching for the required processing characteristics necessary for extrusion coating, such as stable web with a well balanced neck-in and draw down behaviour.
SABIC is the first supplier that achieved to transfer these typical characteristics to a tubular process. This innovative low density polyethylene (SABIC® LDPE nExCoat 5) for extrusion coating is produced by SABIC's proprietary high pressure Clean Tubular Reactor (CTR®) technology, which ensures grades with a high purity and secures the long term security of supply.

Health, Safety and Food Contact regulations. Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet (www.SABIC-europe.com). Additional specific information can be requested via your local Sales Office.

Quality. SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO 9001-2000. It is SABIC Europe's policy to supply materials that meet customers specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

Storage and handling. Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

Environment and recycling. The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC Europe considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC Europe whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

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